

### **Remarks**

Claims 1-24 are pending the application, of which claims 22-24 have been withdrawn from consideration and claims 1-21 have been rejected. By this paper, Applicants amend claims 1, 2, and 13, cancel claims 22-24, and add new claim 25. The specification has been amended to overcome typographical errors.

#### **Claim Rejections - 35 U.S.C. § 112**

The Examiner has rejected claim 13 for having an improper antecedent basis informality. Accordingly, this informality has been amended by replacing “tubular shank passageway” with “elongate fluid return path.”

#### **Claim Rejections - 35 U.S.C. § 102**

The Examiner has rejected claim 1 under 35 U.S.C. § 102(b) as being anticipated by Karlsson et al. (U.S. Patent 5,947,660). Claim 1 has been amended to include the limitation that the radially offset point is “oriented between ends of the radially extending cutting edge.” The Examiner relies on a point of Karlsson et al. “radially offset point (not labeled, see Figure 3),” which is located at an end of cutting edge 19, not between the ends of the cutting edge. Therefore, claim 1 does not read on Karlsson et al. and is not anticipated thereby.

#### **Claim Rejections - 35 U.S.C. § 103**

The Examiner has rejected claims 2-21 under 35 U.S.C. § 103(a) as being unpatentable over Karlsson et al. in view of Applicants’ admitted prior art. The Examiner states

To overcome the rejections below based upon the multiple studies referred to on pages 19-21 of the specification, applicant

must submit copies of the studies, including study authors and dates, with the response to this office action.

The studies referred to by the Examiner are not prior art, and have not been admitted as prior art by the Applicants. The studies referred to by the Examiner are included in the section of the application labeled "Detailed Description of the Preferred Embodiment" rather than the "Background Art" section of the patent application. Although the studies described on pages 19-21 of the specification are directed to prior art gundrills, the actual studies are not prior art absent an admission by the Applicants to the contrary, or absent evidence to the contrary. Accordingly, the studies referred to on pages 19-21 of the specification are not prior art and cannot be properly utilized in a rejection under 35 U.S.C. § 103(a). Additionally, the Examiner's requirement that the Applicants submit copies of the studies, including study authors and dates, would be redundant with the application as filed, the declarations of the inventors, and the dates associated therewith.

Regarding claim 2, claim 2 has been rewritten in independent form including all of the limitation of the base claim. According to the Examiner, "Karlsson et al. discloses . . . discharges drilling fluid through the relief passage (not labeled, see Figures 2 and 4, in between labels 23 and 20 in Figure 4)." No such disclosure is found in Karlsson et al. Karlsson et al. does not describe the feature referred to by the Examiner as "the relief passage," nor does Karlsson et al. describe a discharge of drilling fluid through this feature. The flow of fluid is subject to various factors including rotational and axial speeds of the tool, pressure of the fluids, geometries of the tool, and other factors. Without further understanding of these factors and their relationship to Karlsson et al., the Examiner cannot assume that the geometry of Karlsson et al., which the Examiner has referred to as a relief passage, actually discharges drilling fluid. Since the Examiner's combination of references fails to teach or disclose all of the claim limitations, the Examiner has failed to establish a *prima facie* case for obviousness for claim 2.

Additionally, Karlsson et al. and the prior art gundrills illustrated in Figures 11-11c of Applicants' application lack any motivation to combine these references. Karlsson et al. does not disclose the discharge of drilling fluid through a relief passage nor motivation to combine Karlsson et al. with the prior art gundrills of Figures 11-11c in order to pass fluid through a relief passage. If the Examiner is relying on the Applicants' studies of the prior art gundrills in order to provide such motivation, Applicants' studies are not prior art as discussed above. Therefore, claim 2 is non-obvious over Karlsson et al. in view of Figures 11-11c of the patent application.

Claims 3-16 depend from claim 2 and therefore are non-obvious for at least the reasons stated above with reference to claim 2. The Examiner relies on Applicants' specification for rejecting these claims, specifically the studies conducted and detailed in Applicants' specification. However, as stated above, Applicants' studies of prior art gundrills are not prior art absent admission or evidence to the contrary.

Regarding claim 13, the Examiner alleges that "... the modified invention of Karlsson et al. discloses wherein the crossover port is configured to introduce a jet of drilling fluid into the tubular shank passageway 18 at an angle which assists the drilling fluid and entrained chips to exit the hole being drilled." Karlsson et al. does not disclose a crossover port, nor a crossover port that is configured to introduce a jet of drilling fluid into the tubular shank passageway, nor that the jet of drilling fluid is provided at an angle which assists the drilling fluid and entrained chips to exit the hole being drilled. Since the references fail to teach the claim limitations, a *prima facie* case of obviousness has not been established.

Regarding claim 17, Karlsson et al. and Figures 11-11c of Applicants' application lack motivation to combine these teachings. The studies conducted by Applicants have not been admitted as prior art and without evidence to the contrary cannot be utilized as prior art nor motivation to combine the prior art gundrills of Figures 11-11c of Applicants' application with the teachings of Karlsson et al. Therefore, claim 17 is non-obvious over Karlsson et al. in view of Figures 11-11c of Applicants' application.

Claims 18-21 depend from claim 17 and therefore are non-obvious for at least the reasons stated above with reference to claim 17.

**Conclusion**

In view of the foregoing, Applicants respectfully request that the application is in condition for allowance, which allowance is hereby respectfully requested.

Respectfully submitted,

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